

the ceramic product is used with water containing a large quantity of metal ion such as soluble silica, whereupon the ceramic product can easily be cleaned. Additionally, the silicon-containing functional group of the stain resistant agent has a durability 5 as high as silica in the glazed surface of the ceramic product.

According to test examples 11 to 13, if the silicon-containing functional groups of the stain resistant agent 2 combine with each other, silica is increased such that silicic acid with the network structure is deposited on the layer. Stain can be 10 considered to be incorporated with the silicic acid. On the other hand, according to test examples 1 to 10, 14 and 15, high scale, hairdye, wear and alkali resistances can be achieved when the used stain resistant agent 2 does not contain the silicon-containing functional group combining with another 15 silicon-containing functional group.

Furthermore, according to test examples 1 to 8 and 10 to 14, when the stain resistant agent 2 preferably contains a terminal carbon fluoride group combining with the silicon-containing functional group, the stain resistance also appears as water repellency by a small critical surface tension of the carbon fluoride group. Consequently, high scale, hairdye, wear and alkali resistances can be achieved. Particularly when the carbon fluoride group is preferably $-C_nF_{2n+1}$ where n is a natural number in a range of $1 \leq n \leq 12$, this increases a percentage content of 20 fluoride and the bulk of fluorosilane is accordingly increased. Consequently, high scale, hairdye, wear and alkali resistances 25 can be achieved. $-C_8F_{17}$ in which n=8 is particularly preferable from the viewpoint of cost.

According to test examples 14 and 15, when the stain resistant agent 2 does not preferably contain a terminal alkyl group combining with the silicon-containing functional group, high scale, hairdye and alkali resistances can be achieved.

5 On the other hand, according to test examples 1 to 13, when the stain resistant agent 2 contains a terminal alkyl group combining with the silicon-containing functional group, the stain resistance also appears as lipstick and wear resistances by a small critical surface tension of the alkyl group. According
10 to test examples 1 to 3, 6 and 10, a methyl group may be employed as the alkyl group from the view point of the wear resistance. On the other hand, a propyl or hexyl group may be employed as the alkyl group from the view point of alkali. When the alkyl group is a propyl or hexyl group, the bulk of alkyl group is
15 increased. The stain resistant agent is advantageous in the alkali resistance but disadvantageous in the wear resistance. On the other hand, when the alkyl group is a methyl group, the stain resistant agent is advantageous in the wear resistance but disadvantageous in the alkali resistance.

20 According to test example 8, a quantity of the alkyl group is preferably larger than a quantity of the carbon fluoride group when the stain resistant agent 2 contains a terminal carbon fluoride group combining with the silicon-containing functional group and a terminal alkyl group combining with said
25 silicon-containing functional group. Consequently, since the stain resistant agent does not contain only perfluoroalkylsilane, the stain resistant agent has high lipstick stain and wear resistances.

On the other hand, according to test examples 3 and 5, a quantity of the carbon fluoride group is preferably larger than a quantity of the alkyl group when the stain resistant agent 2 contains a terminal carbon fluoride group combining with the 5 silicon-containing functional group and a terminal alkyl group combining with the silicon-containing functional group. This increases perfluoloalkylsilane, resulting in high scale, hairdye, wear and alkali resistances.

According to test examples 1 and 10, when the 10 silicon-containing functional group and the alkyl group are combined with each other by dimethyl siloxane, this results in high scale, hairdye, wear and alkali resistances. Particularly in test example 1, the dimethyl siloxane contains a straight chain combination of a silicon-containing functional group and an alkyl 15 group, whereas it contains an annular combination of the silicon-containing functional group and the alkyl group in test example 10. Consequently, stably high scale, hairdye, wear and alkali resistances can be achieved.

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EMBODIMENTS

Embodiments 1 to 5 of the present invention will now be described.

First embodiment:

In a first embodiment, the ceramic product is a Western style 25 flush toilet 10 as shown in FIG. 16.

The flush toilet 10 includes a basin 11 having an annular rim 12 formed on an upper edge thereof. The rim 12 has a water passage 13 through which wash water is fed. The rim 12 has a